



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,204	03/29/2004	Katrin Saelzer	04/011 NUT	2868
38263	7590	05/15/2007		
PROPAT, L.L.C. 425-C SOUTH SHARON AMITY ROAD CHARLOTTE, NC 28211-2841			EXAMINER STULII, VERA	
			ART UNIT 1761	PAPER NUMBER
			MAIL DATE 05/15/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/812,204

Applicant(s)

SAELZER, KATRIN

Examiner

Vera Stulii

Art Unit

1761

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 October 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>03/29/2004</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Objections***

Claims 9, 10, and 18 are objected to because of the following informalities:

"bowrfc" should be "bowfrc". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The terms "effective" and "comparable" in claims 1, 7 and 16 are relative terms that render the claim indefinite. The terms are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Amount of tagatose has been rendered indefinite by the use of the terms "effective" and "comparable".

Claim 6 recites the limitation "said fructooligosaccharide" in line 2. There is insufficient antecedent basis for this limitation in the claim. It is also not clear how the claim further limits claim 1, since claim 1 does not recite any "fructooligosaccharide". It is also noted that oligofructose is a degradation product of inulin.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al (US 2002/0197371) in view of Pszczola (Food Technology).

In regard to claims 1, 7 and 16, Lee et al disclose "[a] combination of one or more non-nutritive sweeteners, a sugar alcohol and D-tagatose are included in a zero- or low-calorie beverage or food product to achieve a taste substantially similar to that of a full-calorie beverage or food product" as a fat-replacement composition (Abstract).

Regarding creaminess limitations, Lee et al teach that "[a]s a result of the present inventive method and, in particular, the combination of sweetener or sweetener blend, sugar alcohol and D-tagatose, overall sweetness, aftertaste duration, *mouthfeel* and sucrose-like quality of diet foods and beverages are unexpectedly and advantageously improved" [0018].

Art Unit: 1761

In regard to claims 1, 7 and 16, Lee et al disclose that other ingredients typically used in diet beverages may be used. Furthermore Lee et al disclose use of polydextrose and inulin [0031]. Lee et al also teach that "[i]t is additionally possible to include in a beverage or food product, a combination of at least one non-nutritive sweetener, a sugar alcohol, D-tagatose and at least one nutritive sweetener in order to achieve good tasting, diet or reduced calorie beverages or food products" such as fructo-oligosaccharides [0032].

In regard to claims 1, 2, 7, 9, 16 and 18, Lee et al disclose syrup for use in making finished cola drink [0034]. The syrup included the following fat-replacement composition ingredients: sodium benzoate (2.04 g), phosphoric acid (4.41 g), caffeine (1.27 g), citric acid (1.63 g), cola flavors (38.63 g), aspartame (1.63 g), acesulfame-K (0.528 g), sodium saccharin (0.42 g), sodium cyclamate (4.2 g), erythritol (24.0 g), D-tagatose (48.0 g) [0034]. Therefore, the amount of tagatose in the fat replacement composition is 37.9% (48.0 g) based on the weight of the fat replacement composition (126.758 g) which is in the range recited in claims 2, 9 and 18.

In regard to claims 3, 5 and 11-12, Lee et al specifically disclose polydextrose, inulin and fructo-oligosaccharides [0031],[0032].

In regard to claims 8 and 17, Lee et al disclose that purified water was added to fat replacement composition (126.758 g) until the syrup was 2 liters in volume (approximately 2,000 g), and then 50 ml portions of syrup were added to 250 ml portion of carbonated water [0035]. Therefore amount of fat replacement composition in cola

Art Unit: 1761

drink is about 1.06 weight percent based on the weight of cola drink

$([126.758\text{g}/(2,000\text{g}+10,000\text{g})\times 100\%=1.06\%])$ .

In regard to claims 13-14 and 19-20, Lee et al teach that "the non-nutritive sweeteners are selected from aspartame, acesulfame salts, saccharins, cyclamates, sucralose, alitame, neotame, steviosides, glycyrrhizin, Lo Han Guo, neohesperidin dihydrochalcone, monatin, monellin, thaumatin, and brazzein, and the sugar alcohol is selected from sorbitol, mannitol, lactitol, maltitol, xylitol, erythritol and combinations thereof" [0015].

In regard to claim 15, Lee et al teach that zero- or low-calorie "food product is a confection, dairy product, gelatin, pudding, cake mix, cereal or cereal-based product or baked good" [0013].

Lee et al do not disclose that fat replacement composition provides "at least about 10% more creaminess to a foodstuff in comparison to the creaminess induced within foodstuffs incorporating a comparable amount of tagatose alone" and amount of oligosaccharide based on the weight of the fat replacement composition.

Pszczola discloses synergistic effects of blending sweeteners on the texture and mouthfeel of the food and beverage (p.48, 50). For example, Pszczola disclose the following sweeteners combinations on p.50:

- Polyol+inulin
- Tagatose+erythritol+sucralose
- Acesulfame-K (30%)+aspartame (70%)
- Lactitol+polydextrose

Art Unit: 1761

- Polydextrose+high-intensity sweetener
- Sucrose+neotame
- Sucrose+flavor system

Pszczola discloses that tagatose demonstrates synergistic properties when combined with low-calorie sweeteners, improving the taste profile and mouthfeel of the finished product made with this other sweeteners alternatives" (p. 50). Pszczola also disclose that combination of sweeteners reportedly provides bulk" (p.50). Pszczola also disclose that "tagatose is suitable for use in ... confections, ice creams, soft drinks, cereal and meat replacements" (p. 50). Pszczola also discloses that tagatose may be used as a prebiotic and is suitable for the individuals who are interested in a "low-carb diet" (p. 51). Pszczola also teach that both inulin and oligofructose may be combined with high intensity sweeteners to provide synergy (p. 60). Furthermore, Pszczola teaches that "other sweetener combinations might be used" with inulin or oligofructose (p. 60).

In summary, Lee et al disclose high intensity sweetener+D-tagatose+sugar alcohol +inulin/oligofructose/polydextrose sweetening combination that improves taste and mouthfeel when used in foods and beverages. Pszczola discloses multiple combination of different sweeteners, synergistic effect of such blends and the fact that tagatose in combination with other sweeteners improves mouthfeel of different products. One of the ordinary skill in the art would have been motivated to modify disclosure of Lee et al and to provide sweeteners blend of tagatose and inulin/oligofructose in order to achieve desired mouthfeel creaminess as taught by Pszczola. Since Pszczola

Art Unit: 1761

disclose that both tagatose and inulin/oligofructose are known for their synergistic properties in different sweetening combinations, one of the ordinary skill in the art would have been motivated to form tagatose and inulin/oligofructose blend in order to improve mouthfeel of the final product as taught by Lee et al and Pszczola. Since Lee et al discloses use of sweetening blend in different food products (i.e. confection, dairy product, gelatin, pudding, cake mix, cereal or cereal-based product or baked good), one of the ordinary skill in the art would have been motivated to vary amounts of dietary fiber (inulin and oligofructose) in order to achieve desired texture depending on the particular food product. For example, it would have been obvious to add less fiber to beverage and more fiber to pudding mix based on the difference of texture. Thus, given these teachings, it would have been obvious to one of the ordinary skill in the art to have had a reasonable expectation of success in using tagatose and oligofructose/inulin blend in variety of food products and beverages.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vera Stulii whose telephone number is (571) 272-3221. The examiner can normally be reached on 7:00 am-3:30 pm, Monday-Friday.



Art Unit: 1761

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571) 272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Vera Stulii *V. Stulii*

*Keith Hendricks*  
**KEITH HENDRICKS**  
**PRIMARY EXAMINER**